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THIS IS UNEVALUATED INFORMATION

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1. Shipping by Rail

a. Prior to World War II I can recall that efficiency of workers in the forest service in the Soviet Union was hampered by constant NKVD interference. This, coupled with the impossible requirements laid down by Moscow, was a source of never ending consternation. From 1937 to 1941 the top officials of Soviet industry would issue outlandish quotas. As an example, on certain days it was necessary that 100 thousand wagons of cargo (all types) be loaded in 24 hours (throughout the USSR). Of course this was an impossibility since there weren't that many wagons (flat cars) in the entire country.

b. One of the Soviet laws required that 45 days prior to shipment of cargo, the shipper must present a cargo plan which also specified the number of wagons and box cars necessary for the hauling. This plan, in the case of the forest service, is presented to a local representative of the Ministry of Forests.

c. The Ministry then notifies Moscow which either approves or disapproves the shipment and the amount of rolling stock requested. I can never recall a single instance where we received the number of cars requested. Consequently, we had to store much of our produced goods in sheds and on the ground. The irony of this was that we had already paid the workers for the produced materials which we could not ship. Since we had received an advance from the bank to pay these salaries we were considered personally indebted to the bank until the commodities were shipped. In order to continue operations we were then forced to go to the bank and borrow

against the items which had not been shipped. The size of the loan depended upon the amount of cargo which we had in our possession. Thus our continued operations were conducted in a state of perpetual obligation and red tape.

2. Dental Practices

The dentists in the USSR were not permitted to possess gold or silver from which they could make tooth repair or false teeth. Further, it was contrary to the law for a citizen to possess either gold or silver. This accounts for the large number of stainless steel teeth perceived among the Soviet citizens. As I understand the government issued stainless steel to the dentists on a norm or quota basis. In many cases, however, the more fortunate citizen was able to work around the law. Although individuals were not permitted to possess either gold or silver, the commission shops legally retailed gold rings which could be easily purchased if the purchaser had the price. Many families in the USSR (certainly in the Kalininskaya Oblast) did not turn in all of their heirlooms among which were gold rings, watches, etc. People in possession of such items would hand the dentist (a good friend) a few extra rubles and he would melt the gold down and make fillings, etc., for them. If such persons were questioned by the NKVD (MVD) they would claim that they had purchased rings from the commission shops and had them melted down.

3. Railroads

a. Although I have travelled to various parts of the Soviet Union by rail, my comments can be confined to the Kalininskaya Oblast and nearby oblasts. [redacted] travelled the areas very often. [redacted] I had occasion to visit with several people who had left these areas after World War II. From their conversations I understood that the railroads in the Kalininskaya Oblast suffered very little appreciable damage during the period prior to 1945.

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b. The rails used on the railways were of two types. Type A was from 18 to 22 meters long. This was a heavy duty rail and was used on the main lines. Type B was about three meters shorter and lighter. It was used on secondary lines. [Source did not recall the weight of rails per meter.]

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c. Railroad ties were of three types and sizes. Type A, considered the best, was primarily pine wood. These ties were about 14 inches wide and 10 inches high. (I know that they were dipped in a chemical preservative but cannot recall the name of the solution.) Oak wood ties were sometimes used on the main lines but pine wood was as good and was more abundant. For secondary lines, we used fir wood, but as I recall, the use of fir wood was considered only as a temporary measure.

d. The rails were joined together by bars (fish plates) of three sizes. They were as follow:

Type A - was used on the heavy rails. Bolts are inserted through the visible holes and drawn together by a wrench about 30 inches long, devised for added leverage. The rails are held together by the above bars and bolts. There is no welding done or needed.

Type B - used on secondary lines and is designed the same as type A. Since lighter and slower moving trains are drawn over these rails, only three bolts to each rail are used.

Type C - used on sidings for secondary lines.

There was only one type of spike used as I can recall. It is approximately 6" long and 3/4" thick. This spike in appearance is exactly like those utilized in the US. There were no screw spikes in use.

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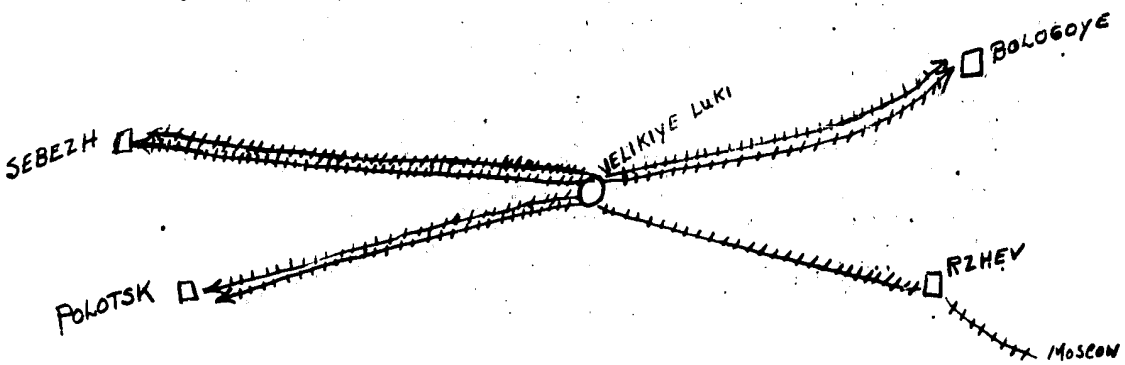
e. Signalling in the Kalininskaya Oblast was handled by the block system. This system was definitely employed between the following points (see diagram under paragraph 4).

f. The main rail arteries in the Kalininskaya Oblast are comparable to US standard gauge. The gauge is 1524 mm (4.9 ft).

4. Key Railroad Points



a. The above diagram is also representative of the areas with which I am quite familiar. I can recall in 1941 that passenger travel was very light, that by and large, military trains and cargo were hauled. The pivot point or perhaps most important railway junction for the area plus approaches from Moscow to the Baltic was Velikiye Luki. The block system of signalling was used quite extensively since traffic was very heavy to and from the Baltic countries. The large railway yards, the sidings and marshalling yards at Velikiye Luki were completed in 1932 or 1933. As I can recall, the area was developed primarily by military engineers who emphasized the development of Velikiye Luki as the primary junction. The repair shops at Velikiye Luki are about 100 meters south of the railway station. (I cannot recall the number of rail sidings and tracks at this junction, but would estimate that there were at least 75 such tracks.)

b. Polotsk to Velikiye Luki is a distance of about 100 kms. The road bed contains double tracks for the entire distance. This line was used almost exclusively by military forces of the USSR.
(1) The block system of signalling was installed between the above points
(2) The gauge of these double tracked roads is 1524 mm (4.9 ft)
(3) Distance between the ties is one normal step (18 to 24 inches)
(4) A-1 type rails.

c. Sebezh to Velikiye Luki (a distance of approximately 150 kms.)
(1) Double track for the entire distance
(2) Heavy type rails (A-1)
(3) Block system for signalling

d. Velikiye Luki to Moscow (450 kms)
(1) Single track
(2) 1524 mm gauge
(3) Heavy duty rails
(4) Block signal system.

e. Velikiye Luki to Bologoye (300 kms)
(1) Double track - completed in 1931
(2) Heavy duty rails
(3) Block signal system

f. Velikiye Luki to Rzhev
(1) Single tracked (1941)
(2) Heavy duty rails

g. Moscow-Leningrad
(1) The rails between these two points were heavy duty. The gauge was 1524 mm..
(2) I can recall that the block system on this line was spaced at intervals from four to seven kms apart. This spacing was governed by the various hills between the above points.

h. Ballast
(1) From Velikiye Luki to Moscow and Bologoye only sand ballast was used.
(2) From Sebezh to Velikiye Luki and from Polotsk to Velikiye Luki sand and gravel were used for ballast. (The gravel was quite large with the pebbles approximately two inches in diameter.)

i. Gradient
(1) From Sebezh to Moscow and from Polotsk to Bologoye the gradient is approximately the same. The rise is about eight meters for each kilometer of distance.
(2) The steepest climbs by rail in the region from east to west are from Mayevo to Novosokolniki, a distance of 27 kms. /Novosokolniki and Mayevo (a small junction) are west of Velikiye Luki on the main line west to Sebezh./ The climb is constant, particularly seven kms west of Novosokolniki. At this point /seven kms west of Novosokolniki/ is a small railway station called Vydumka /could not be located on the charts - source states that it is used only for maintenance of the railway line/. From Novosokolniki to Vydumka the use of two coal burning locomotives was necessary. /Source cannot recall that two locomotives were necessary on any other haul./

j. Wagons (Flat Cars)
(1) As previously mentioned, there was a constant shortage of flat cars in 1941.
(2) We had two types of box cars. The most commonly used was the two-axle type which carried 16.5 long tons of gruz /cargo/. The second type which we called the American Vagone (box car) was of two sizes. One size carried 40 long tons and the other had a 60 long ton capacity. The American types were four axle cars and had automatic brakes. /Source means that they were fitted with brake shoes and steam pressure fittings./

k. Bridges
(1) There are two large steel bridges /for the double track line/ which cross the Lovat River about four kms west of Velikiye Luki.
(a) These bridges are approximately 20 kms apart. They are identical in appearance. Each is about 100 meters long and stands about 50 meters above the water. These bridges are fixed span types with steel supports hooked to the base. I cannot recall definitely but believe that there are either two or three cement supports or pilings under these bridges. These supports were spaced approximately 20 meters apart.
(b) I have no reason to believe that the Soviet system (with reference to security) has changed. Each approach to the bridge was patrolled 24 hours per day /two guards at each approach/. Whenever we rode over the bridge, we looked forward taking only a casual glance below. /Source recalls that if any passengers evinced interest in the areas around these bridges, guards who rode the trains cautioned them against such interest./ These bridges were fixed or stationary.
(2) Twelve kms east of Velikiye Luki on the main line to Bologoye is a fairly large bridge. It is of steel construction, is about 50 meters long and stands about 15 kms above the Kunya River. This is also a fixed span bridge.
(3) At Staraya Toropa, 75 kms east of Velikiye Luki, is a steel bridge, similar to the one which crosses the Kunya River. It is named after the river which it crosses, the Staraya Toropa.
(4) Another steel bridge is located at the Zapadnaya Dvina railroad station about 100 kms east from Velikiye Luki. This bridge is about 50 meters long, is of steel construction and is a single track bridge.

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(5) At Nelidovo station, 150 kms east of Velikiye Luki is a steel bridge that reaches across the Mezha River. This bridge has no arches or spans or sides. It clears the water by approximately eight meters and is 40 meters long. This is about the only bridge in the entire oblast which was not guarded by Soviet military forces.

(6) At the town of Zubtsov, west of Moscow, a large steel bridge spans the Volga River. This span bridge is approximately 100 meters long and has three cement supports under it which are spaced about 20 meters apart. It stands about 15 meters above the water line. In my estimation, this is a very important bridge for it serves lines which lead to the west and a branch northwards towards Leningrad.

l. If my memory does not fail me I cannot recall a sing[illegible]nnel on any of the above lines.

m. There was sufficient water for all of the locomotives used in the above areas.

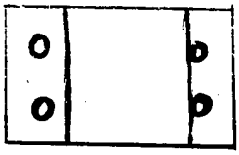
n. Railroad crews (section gangs)

(1) Section workers were hauled to and from work via the old manually operated hand car.

(2) A section gang is composed of 10 to 12 laborers and is referred to as a brigade.

(3) Each brigade is assigned 10 to 12 kms of track and with its brigadier (foreman) is charged with the responsibility of repairs and maintenance excluding bridge repair. (Special engineers are assigned to bridge repair, construction and maintenance.)

o. The only other factor of consequence which I can recall is the type of tie plate used. It is similar to those used in the US. The outer edge of the plate fits snugly against the lower rail, thus keeping the rail in place.



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